Patents Act 1977 **Opinion Number** **14/19**

OPINION UNDER SECTION 74A

Patent	EP 3019411
Proprietor(s)	Solocap-mab
Exclusive Licensee	
Requester	Concept IP
Observer(s)	
Date Opinion issued	18 September 2019

The Request

1. The comptroller has been requested by Concept IP ("the Requester") to issue an opinion as to whether EP 3019411 B1 ("the Patent") is valid on the following grounds: (i) whether claim 1 (the only claim) of the Patent lacks novelty or an inventive step in light of either of two documents; and whether claim 1 of the Patent includes matter that extends beyond that disclosed in the application for the Patent as filed.

2. The Patent entitled "Cap made of synthetic material" is derived from international PCT patent application number PCT/FR2014/051449 and published as WO 2015/004352 A1 ("the Application"). The Application was filed on 12 June 2014 and claims priority from FR1356785, filed on 10 July 2013. After entering the European regional phase, the Patent was granted on 12 June 2019 and remains in force in the UK.

3. The request was received on 1 July 2019. It was accompanied by a statement explaining the request along with copies of the Patent, the Application, the two cited documents and English translations of each.

4. There were no observations or observations in reply.

Whether all parts of the request are allowable

5. The comptroller will not issue an opinion if for any reason he considers it inappropriate in all the circumstances to do so (by virtue of section 74A(3)(b) of the Patents Act 1977 – "the Act"). In particular, requests will be refused which do no more than repeat arguments already considered pre-grant. Here, one of the cited documents, WO 2012/150309 A1 ("PL2"), was cited by the EPO examiner during

prosecution of the Patent (see Annex to communication dated 15 September 2017). The EPO examiner raised objections regarding novelty and inventive step of the claimed invention based on this document which were answered by the applicant to the satisfaction of the examiner. Therefore, PL2 has clearly been considered pre-grant and does not raise a new question. I will not consider this document in my opinion.

6. The Requester states in paragraph 047 of the request, "*In the unlikely event that the Examiner finds that the subject matter of claim 1 is novel, it is submitted that any novel features are trivial and would have been obvious at the Priority Date and is therefore invalid*." The Requester has not provided any further supporting arguments regarding inventive step. A request must provide sufficient information so that an opinion can be issued. Further, arguments must be presented in enough detail so that any interested parties can counter the arguments put forward if they wish to do so. In this case insufficient detail regarding inventive step has been provided. Therefore, with respect to the remaining document PL1, I will ignore the question of inventive step and restrict my opinion to that of novelty.

The Patent

7. The Patent relates to a stopper 10 in the form of a plastic cap which is capable of being screwed onto the neck of a receptacle, such as a bottle containing carbonated drinks, mineral water etc, to seal the opening. The stopper has an internal circular stopping wall 6 which can enter the neck of the receptacle. The stopper also has a safety collar 7 which is connected both to the stopper by a pre-cut line 8 and to the neck of the receptacle. To open a receptacle equipped with the stopper, the stopper is unscrewed allowing the connection at the pre-cut line to be broken and the internal circular stopping wall to be removed from the neck of the receptacle.

8. The Patent explains that in order for a stopper to carry out its function properly, the circular stopping wall must apply tight friction to the neck of the receptacle and the connection produced by the pre-cut line must be sufficiently strong. Therefore, the grip of the user on the stopper must be sufficiently strong and comfortable to allow a user to apply a sufficient twisting moment to the stopper to bring about opening. To achieve this, the base of the stopper of the invention includes an additional raised portion 2A in addition to a peripheral portion 2B thus increasing the outer gripping surface of the stopper. Also, to improve the quality of the grip, protrusions 14 are included on the outer walls of the stopper. (See Figures 5 and 6 below, reproduced from the Patent.)

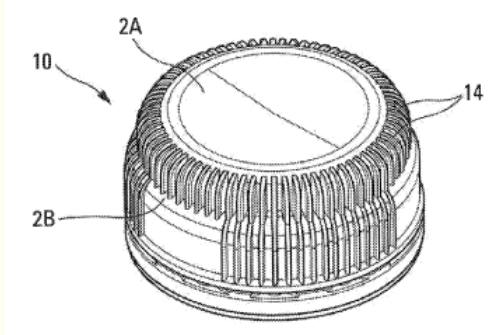

Fig. 6

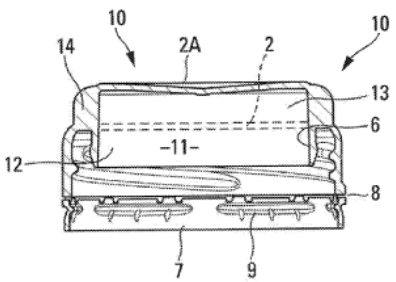

Fig. 5

9. The Patent has a single claim, which reads as follows with the features separated out in the same form as in the request:

1.0 Synthetic material stopper in the form of a cap, which is intended for being mounted on the neck of a receptacle by screwing and comprises

1.1 an internal circular stopping wall, which
1.1.1 is carried by a base of the stopper and
1.1.2 is capable of entering said neck, and

1.2 a safety collar
1.2.1 connected to a lower portion of said stopper by a pre-cut line and
1.2.2 to said neck by retaining means,

1.3 the portion of said base that matches said internal circular stopping wall being raised on the outside to enlarge the outer surface for gripping of said stopper,

1.4 a cavity defined by the internal circular stopping wall and a cavity created by the outer raised portion of the base joining together and forming a single large cavity having a smooth wall,

1.5 a circular indentation formed between the raised portion and the non-raised portion of the base comprising gripping protrusions,

1.6 the gripping protrusions being first diametric fins which are integral to the walls of said circular indentation,

1.7 the stopper further comprising an external surface between the lower portion of the stopper and the circular indentation,

characterised in that

1.8 said external surface comprises a plurality of second diametric fins,

1.9 each of the second diametric fins being longitudinally extended by one of the first diametric fins.

Construction of claim 1

10. When considering the validity of the claims of the Patent I will first need to construe them. That is to say I must interpret them in the light of the description and drawings as instructed by Section 125(1). In doing so I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean.

11. The Requester has not defined the skilled person. I consider this person to be someone skilled in the art of designing and manufacturing synthetic stoppers for receptacles.

12. Claim 1 is generally straightforward to construe. Nevertheless, there are some terms

that are worthy of consideration. Throughout this opinion I will refer to the English translations of the Patent and the Application provided by the Requester.

13. From feature 1.3, the portion of the base that *matches the internal circular stopping wall* is raised on the outside to enlarge the outer surface. From the Figures the skilled person would understand that the outer surface of the stopper is enlarged by increasing the height of the stopper along a line leading from the internal stopping wall. As page 4 lines 2-3 of the English translation of the Patent explains, "*The base of the stopper 10 thus now comprises said raised portion 2A and a peripheral portion 2B."*

14. Feature 1.5 defines a *circular indentation* formed between the raised portion and non-raised portion of the base. The skilled person, from the Figures, would understand the circular indentation to be the space formed by the walls of the two portions 2A, 2B at their intersection.

15. Feature 1.6 specifies gripping protrusions being *first diametric fins* which are integral to the walls of said circular indentation. Later in feature 1.8, the lower surface of the cap comprises *second diametric fins*. Only the first diametric fins are mentioned in the description of the Patent. No further explanation is provided regarding their shape. Firstly, the skilled person would understand the term *diametric* to mean that the protrusions follow a longitudinal line extending from the diameter of the stopper (see Figure 6). Regarding the term 'fin', the Requester provides the Oxford English Dictionary definition of this term as "*a portion of a mechanism like a fish's fin in shape or purpose*". As the Requester points out the first and second diametric fins are of different shape. The Requester considers the first fins to be thin plate-like elements and therefore more 'fin-like' according to the dictionary definition; the Requester considers the second fins in contrast to be shallow, domed ridges. From a consideration of both sets of protrusions, I think the skilled person would construe the term fin here quite broadly to be simply a protrusion in the form of a narrow projecting rib or ridge.

16. Feature 1.6 further states that the first diametric fins are *integral to* the walls of the circular indentation. The term '*integral to*' is not used in the description. Instead the last sentence of the description states that the diametric fins are *rigidly connected to* the walls of the indentation. The skilled person would adopt this latter definition.

Added matter - the law

17. The section of the Act concerning added matter is section 76(2), which reads:

> *76(2) No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.*

18. In Bonzel and Schneider (Europe) AG v Intervention Ltd [1991] RPC 553, Aldous J described the task of determining whether an amendment to the description had the result that a patent as granted disclosed matter which extended beyond that disclosed in the application as:

(1) to ascertain through the eyes of the skilled addressee what is disclosed, both explicitly and implicitly in the application;
(2) to do the same in respect of the patent as granted;
(3) to compare the two disclosures and decide whether any subject matter relevant to the invention has been added whether by deletion or addition. The comparison is strict in the sense that subject matter will be added unless such matter is clearly and unambiguously disclosed in the application either explicitly or implicitly.

19. In Richardson-Vicks Inc.'s Patent [1995] RPC 568, Jacob J summarised this by saying: "*the test of added matter is whether a skilled man would, upon looking at the amended specification, learn anything about the invention which he could not learn from the unamended specification*."

20. Amendments which limit the scope of a claim by the introduction of one or more features from the specification may in certain circumstances add matter through what is known as "*intermediate generalisation*". This concept was explained by Pumfrey J in Palmaz's European Patents (UK) ([1999] RPC 47, upheld on appeal [2000] RPC 631):

> *"If the specification discloses distinct sub-classes of the overall inventive concept, then it should be possible to amend down to one or other of those sub-classes, whether or not they are presented as inventively distinct in the specification before amendment. The difficulty comes when it is sought to take features which are only disclosed in a particular context and which are not disclosed as having any inventive significance and introduce them into the claim deprived of that context. This is a process sometimes called 'intermediate generalisation'."*

Added matter - arguments

21. Claim 1 of the Patent has a number of features 1.0 – 1.9 listed above. Claim 1 of the Application as filed included only features 1.0 -1.3. Features 1.4, 1.5 and 1.6 correspond to dependent claims 2, 3 and 4 respectively of the Application. Features 1.7 -1.9 are additional features not present in the claims as filed. The Requester submits that there is absolutely no textual basis in the specification for any part of features 1.7 to 1.9. The Requester asserts further that the only basis for these features is in the drawings, specifically Figures 2-7. The Requester concludes, however, that the Figures do not provide basis for claim 1 as granted.

22. The Requester makes further arguments regarding features 1.8 and 1.9, which I will summarize here. The Requester submits that because these features are not mentioned in the text of the Application, they are therefore not disclosed as having any inventive significance. Moreover, the Requester asserts that features 1.8 and 1.9 were introduced with several contextual features absent. For example, they submit that from the Figures it is clear that the second diametric fins are absent in three circumferential segments of the external surface and therefore a substantial number of first diametric fins have no second diametric fins associated with them. Therefore, the Requester concludes that the requirement of feature 1.9 is an overly simplistic definition of the relationship between the two sets of protrusions.

23. The Requester notes from Figures 4 and 5 that the second diametric fins: start with a depth of nearly zero and flush with the circular depression, where they are connected to the first diametric fins; deepen along the rounded shoulder; have a constant depth along the external surface between the lower portion of the stopper and the circular indentation; and project radially further than the first diametric fins, which are recessed radially with respect to the second diametric fins in their entirety. The Requester also notes that the second diametric fins: terminate at a lower, protruding ring; are radially flush with the outer circumferential surface of the lower ring; and are shallow, domed ridges.

24. The Requester submits that to summarise the relationship between the first and second diametric fins in the manner defined in claim 1 finds absolutely no basis in the Application. The Requester submits further that there is no basis for the exclusion of all of these additional features when including the second diametric fins as defined in claim 1. The Requester asserts that the combination of these features would affect the grip characteristics of the cap, which is the entire focus of the application. The Requester concludes that the inclusion of the second diametric fins without these features represents an intermediate generalisation, not supported by the Application.

25. Finally, the Requester explains that the term "*diametric fin*" is used in the Application to refer only to the first diametric fins. The Requester asserts that the second diametric fins are shallow, domed ridges which bear no resemblance to the first diametric fins which are thin, plate-like elements. The Requester believes that the first diametric fins are more consistent with the Oxford English Dictionary definition of the term 'fin' which is "*a portion of a mechanism like a fish's fin in shape or purpose*". The Requester concludes that the use of the term "*diametric fin*" to define the second set of protrusions does not find basis in the Application.

26. In response to all of these points, I begin by noting that it has been held that in order to determine the original teaching of an application, the whole of the description, any drawings and any claims which were present on the filing date may be considered. Moreover, it is allowable to add to the claims matter disclosed in a drawing provided it does not go beyond what a skilled person would judge to be disclosed in the drawing. Further, matter may be regarded as having been disclosed if the skilled reader would realise that it was implicit in the original document.

27. I begin with Feature 1.7 which defines an external surface between the lower portion of the stopper and the circular indentation. This surface is not mentioned in the text of the Application. I consider, however, that the skilled person would realise that such a surface is implicit. Lines 33-34 of page 3 of the translation of the Application states: "*The base of the stopper 10 thus now comprises said raised portion 2A and a peripheral portion 2B*". The skilled person would appreciate that the external surface of feature 1.7 is simply the outer surface of peripheral portion 2B. I do not consider the inclusion of feature 1.7 to add matter.

28. I now move onto features 1.8 and 1.9 which specify that this lower external surface comprises a plurality of second diametric fins; and each of the second diametric fins are longitudinally extended by one of the first diametric fins. I agree with the Requester that there is no mention of the second diametric fins in the text of the Application. The only mention of gripping protrusions at all is in the final paragraph of

the Application (with a similar passage on page 2) which reads: "*To improve the grip on the stopper 10, gripping protrusions 14 are arranged in the circular indentation 15 between the raised portion 2A and the non-raised portion 2B of the base 2. Gripping protrusions of this type can be diametric fins that are rigidly connected to the walls of the indentation 15*." These first diametric fins can be seen for example in Figure 6.

29. Despite there being no mention of the second diametric fins in the text of the Application, a second set of protrusions can be seen clearly in Figures 2-7. In particular, from Figure 6, the external surface of portion 2B comprises a plurality of further protrusions.

30. I agree that the two sets of protrusions appear to be of a different shape. However, I consider that the skilled person would still consider them both to be generally 'fin-shaped'. I do not consider the term 'second diametric fins' in itself to add matter.

31. I agree with the Requester that there are many further features of the second diametric fins that can be gleaned from the Figures that have not been included in claim 1. Most significant of these is that the second diametric fins are absent in three circumferential segments. However, each of the second diametric fins is clearly associated with a first diametric fin as required by feature 1.9.

32. Regarding the arguments surrounding added matter via the process of 'intermediate generalisation', although the second diametric fins are not mentioned in the text the skilled person would appreciate that they are present to further improve the grip on the stopper. This would be implicit from the Application as a whole. I agree that the second diametric fins are included in the Figures in a particular context in combination with other features. However, firstly it is important not to glean too much from a Figure which is only intended to be a schematic representation. Even if I accept that all of the features noted by the Requester in the Figures are present, I am not convinced that any of them are necessary to carry out the invention. The skilled person would realise that the particular embodiment illustrated in the Figures is just one way that the second diametric fins could be included on the cap. The combination of the additional features highlighted by the Requester is unlikely to affect the grip characteristics of the cap as the Requester suggests in any significant way. Importantly in my view the skilled person will not learn anything about the invention by omitting these features which is not apparent from the original specification. Therefore, in my opinion the inclusion of the second diametric fins does not represent an intermediate generalisation.

33. In summary, I do not consider the inclusion of features 1.7-1.9 in claim 1 to add matter beyond that disclosed in the Application as filed.

Novelty – the law

34. The Requester argues that claim 1 lacks novelty in light of cited document PL1. Section 1(1)(a) of the Act reads:

> *1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say*
> *(a) the invention is new;*

35. The relevant provisions in relation to novelty are found in section 2(1) and section 2(2) which read:

> *2(1) An invention shall be taken to be new if it does not form part of the state of the art.*
>
> *2(2) The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.*

Whether claim 1 lacks novelty in light of the cited prior art

36. The Requester submits that claim 1 lacks novelty in light of PL1, patent document WO 2011/162642 A1. An English translation in the form of family member, Canadian national phase filing of PL1, CA 2806315 A1 has been provided by the Requester. I will use this translation here. PL1 was published in 2011 before the priority date of the Patent and is therefore part of the state of the art for the purposes of novelty.

37. PL1 is concerned with a polyethylene/propylene cap particularly for drinks bottles. The cap has a 'lower foundation' 5 with a threaded portion for screwing onto a receptacle. The cap also has an upper chamber 3 above the lower foundation. Stiffening ribs 4 are placed on the upper chamber side wall 8 to increase the strength of the upper chamber's walls and prevent deformation of the upper chamber 3. This is important because the cap experiences loads caused by internal pressure of carbonated beverages and loads transferred from a hook attached to the upper chamber. (See discussion on page 2 lines 14 – 25; page 3 lines 23-24.)

38. The Requester refers to the variants illustrated in Figures 3 and 8, reproduced below including the additional labels (letters rather than numbers) provided by the Requester. Page 4 lines 5-7 of PL1 states "*In some cases, stiffening rib (4) can be prolonged and lie on the cap lower foundation (5) wall (Fig. 8), what leads to even greater construction strengthening*". These prolonged ribs are illustrated in Figure 8.

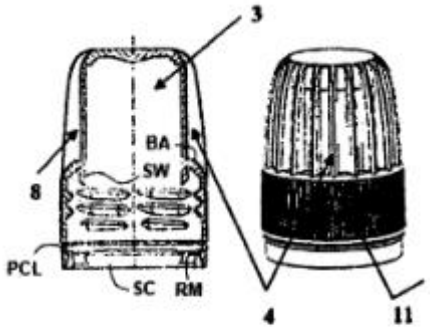

Fig. 3

Fig. 8

39. The Requester asserts that it is clear from PL1 that the variant illustrated in Figure 8 includes the internal features shown in Figure 3. In response, I note that Figure 3 represents prior art from a previous patent application RU 2008145117 (see page 1 of PL1 lines 17-19). The cap of Figure 3 is described as a 'close analogue' but does not have a hook like that disclosed in the embodiments of PL1 (such as the cap of Figure 8). I agree, however, from PL1 as a whole that the skilled person would appreciate that the variant of Figure 8 includes the internal features of Figure 3.

40. I now compare each of the features of claim 1 with PL1 in the manner adopted by the Requester.

41. The synthetic cap of PL1 has a threaded portion (for example page 2, line 24) to allow the cap to be screwed onto the neck of a receptacle and therefore meets feature 1.0.

42. Although the text of PL1 does not mention an internal stopping wall, I agree with the Requester that the skilled person would recognize wall SW in Figure 3 as such. This wall is carried by a base BA and would be capable of entering the neck of a receptacle. Therefore, PL1 meets feature 1.1.

43. Similarly, the text of PL1 does not mention a safety collar. The Requester submits that a tamper evident band SC is disclosed in Figure 3 connected to the lower portion 5 by a pre-cut line PCL and to the neck by retaining means, cams RM. These features are not clear from the Figures. Although the lower part of the cap illustrated in Figure 3 ***may*** represent a safety collar with the required connections, I do not consider feature 1.2 to be clearly and unambiguously disclosed. Therefore, PL1 does not anticipate feature 1.2.

44. From Figure 3, it is clear that the portion of the base that matches the internal circular stopping wall is raised on the outside to enlarge the outer surface. This can be seen as the walls of the upper chamber 3 are in line with the internal stopping wall. The enlarged outer surface created will necessarily be employed for gripping the stopper. Therefore feature 1.3 is anticipated.

45. The cavity defined by the internal circular stopping wall and the cavity created by the outer raised portion of the base can be seen from Figure 3 to join together to form a single large cavity with a smooth wall. Therefore, PL1 meets the terms of feature 1.4

46. From Figures 3 and 8, there is a circular indentation formed between the raised portion (upper chamber sidewall 8) and the non-raised portion (lower foundation 5). The circular indentation comprises protrusions 4. The description of PL1 describes these as "vertical stiffening ribs" which are used to strengthen the upper chamber's walls. However, the ribs would also be suitable for gripping. Therefore, feature 1.5 is anticipated.

47. Feature 1.6 requires the gripping protrusions to be diametric fins which are integral to the walls of the circular indentation. The skilled person would consider the protrusions (upper part of 4 in Figure 8) to be diametric fins as they protrude along a diameter of the cap and are in the form of narrow projecting ribs or ridges. According to for example page 3 lines 16-17 of PL1 the stiffening rib 4 "*rests against lower foundation 5*". Later, on page 5, we are told that the ribs are created by die casting

using "*press-form containing shape-generating lugs*" (illustrated in Figure 11). The skilled person would realise from this that the ribs are rigidly connected to the indentation. Therefore feature 1.6 is anticipated by PL1.

48. The cap of PL1 clearly comprises an external surface between the lower portion of the cap and the circular indentation. This is the surface of the lower foundation 5. Feature 1.7 is met.

49. To meet feature 1.8, the external surface of the lower foundation 5 must comprise a plurality of second diametric fins. From Figure 8 and the passage on page 4 lines 5-7, the stiffening ribs on the upper chamber's wall can be prolonged i.e. lengthened and "*lie on the cap lower foundation (5) wall*". I consider the lengthened part of ribs 4 to be diametric fins as again they protrude along a diameter of the cap and are in the form of narrow projecting ribs or ridges. The ribs lie on the lower foundation wall and therefore the surface of the wall comprises the ribs. Therefore, I consider the disclosure of PL1 to be sufficient to meet the terms of feature 1.8.

50. Feature 1.9 requires each of the second diametric fins to be longitudinally extended by one of the first diametric fins. Although from Figure 8 there are some segments of the lower foundation 5 where there are no second fins, it is clear from the text that where they do exist they have been formed by prolonging the stiffening ribs 4 from the upper chamber. Therefore, PL1 meets the terms of feature 1.9.

51. In conclusion, I find that PL1 anticipates all of the features of claim 1 apart from feature 1.2. Therefore, in my view claim 1 is novel in light of PL1.

Opinion

52. It is my opinion that the invention of the Patent as defined in claim 1 is novel in light of patent document PL1, WO 2011/162642 A1. It is also my opinion that claim 1 does not include matter that extends beyond that disclosed in the application for the Patent as filed.

Susan Dewar
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.